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September 11, 2000

TO: Diane Newman, Program Specialist, Emergency Management Division

FR: Cynthia Stewart, Airport Manager CS

RE: Proposed Seismic Non-Structural Mitigation Project

Per your August 31, 2000 e-mail indicating that there may be an opportunity for some agencies to receive funding for seismic, facility non-structural mitigation projects, the Airport is proposing a project for consideration, as described below.

Description of the Project

The King County International Airport facilities include a building to house the Airport's Aircraft Rescue and Fire Fighter unit, which also serves as the Airport Police. This building, which was originally constructed in 1976 and has since undergone two major renovations to add fire truck and office capacity, contains a total 3,827 SF. The unit housed in the building serves the Airport 24 hours/day, 365 days/year, and would be needed for the Airport's role in responding to any earthquake or other regional emergency, even if the Airport were not affected. If the Airport experienced a major earthquake, there are a number of non-structural problems with the building that could inhibit the unit from performing this critical function. These were identified in a seismic consultant's report offered the Airport in draft form earlier this month. The report will be finalized in October, 2000. The specific problems are listed in Attachment A hereto. A large scale seismic renovation, in conjunction with addition of supplemental fire equipment storage and office space, is planned in 2002. In the interim, the non-structural problems remain of concern.

Criteria

The project meets all of the requisite criteria as you described them. This is explained as follows.

1. Protect a critical function that is essential to our government's ability to conduct business.

   The ARFF facility directly supports public safety for police, fire fighting, aircraft rescue and large scale emergency and natural disaster response either at the Airport or when the Airport is involved in a community-wide response.

2. Protect systems that benefit multiple clients (hundreds or thousands) such as a data center.

   As noted above, because the Airport supports a much broader community, both direct and indirect users, it has the potential to affect (or be unable to respond to, as the case may be) hundreds and thousands of clients. The ARFF Building houses police and fire fighting/rescue personnel, fire trucks/equipment and a wide array of electronics and communications systems which are networked with other public safety agencies. The building is directly linked to the Airport's FAA Control Tower and is specially prepared to respond to all incidents involving aircraft. ARFF serves thousands and potentially millions of persons and property over a large region.

3. Protect people or property from something dangerous that might fall (and example would be a free standing sculpture placed in public entry to a county facility).

   If not remedied, the problems listed in Attachment A would fall and injure County employees needed for public emergency response, thereby both causing physical injury and reducing or eliminating the needed service, and property, with the same potential effects.

Risk exposure of not doing this mitigation project

The exposure to the county of not pursuing this mitigation project is liability for not performing essential and required functions if the facility and/or the employees and equipment housed there were to be rendered non-operational and non-responsive to matters of public safety in the aftermath of a large earthquake. The Airport is liable under federal regulations for providing these emergency response services. Beyond that, there is a broader risk involved in not being able to respond as emergency plans would project.

Cost Estimate

A cost estimate is not available at this time but will be provided in October, 2000.

Thank you for the opportunity to have this project considered for funding. We are anxious to hear your response. If you or your committee have any questions, you can reach me at 206-296-7430.

ATTACHMENT A
DESCRIPTION OF ARFF FACILITY AND NON-STRUCTURAL SEISMIC PROBLEMS

The ARFF building houses 2-7 employees each shift, two fire trucks, and a variety of additional emergency response equipment and includes the following facilities:

- Floor 1 - 2 fire truck bays, storage space, holding cell, laundry and exercise room;
- Floor 2 - observation cab, Chief's office, administrative offices, conference room, kitchen, toilets and locker rooms.
- Electrical generator

Non-Structural Seismic Deficiencies include the following:

3.9.1 Basic Non-structural Component Checklist:

- Ceiling Systems: Lay-in Tiles. "Lay-in tiles used in ceiling panels located at exitways and corridors shall be secured with clips."
- Building Contents and Furnishings: Tall Narrow Contents - "Contents with a height-to-depth ratio greater than 3 Immediate Occupancy shall be anchored to the floor slab or adjacent walls. (Tier 2: Sec. 4.8.11.1)"
- Mechanical and Electrical Equipment: Heavy Equipment - "Equipment weighing over 20 lb. that is attached to ceilings, walls, or other supports 4 ft. above the floor level shall be braced. (Tier 2: Sec. 4.8.12.2)"
- Flexible Couplings: "Fluid, gas and fire suppression piping shall have flexible couplings."

Chapter 3.9.1S Supplemental Non-structural Component Checklist

- Building Contents and Furnishings: File Cabinets - "File cabinets arranged in groups shall be attached to one another (Tier 2: Sec. 4.8.11.2)"
- Mechanical and Electrical Equipment: Heavy Equipment - "Equipment weighing over 100 lb. shall be anchored to the structure or foundation."
- Piping: Fluid and Gas Piping - "Fluid and gas piping shall be anchored and braced to the structure in accordance with SP-58 (MSS, 1993). (Tier 2: Sec. 4.8.13.3)"
- Ducts: Duct Bracing - "Rectangular ductwork exceeding 6 square feet in cross-sectional area, and round ducts exceeding 28" in diameter shall be braced. Maximum transverse bracing shall not exceed 30 feet for Immediate Occupancy. Maximum longitudinal bracing shall not exceed 60 feet for Immediate Occupancy. Intermediate supports shall not be considered part of the lateral-force-resisting system. (Tier 2: Sec. 4.8.14.1)"